Amendments to the Claims

Claims 1-14 (Cancelled)

Claim 15 (Previously Presented): A method for treating a pathology characterized by damaged myelin or neurological deterioration, comprising

(i) providing a composition in vitro that consists essentially of mesenchymal stromal cells and a physiologically compatible carrier,

(ii) exposing said composition to conditions such that said mesenchymal stromal cells differentiate into differentiated cells selected from the group consisting of neurons and oligodendrocytes, and

(iii) allowing said differentiated cells to compensate for said neurological deterioration or damaged myelin in a subject suffering from said pathology.

Claim 16 (Previously Presented): A method according to claim 15, wherein step (ii) comprises introducing said composition into the nervous system of said subject.

Claim 17 (Previously Presented): A method according to claim 15, wherein step (ii) is implemented in vitro and step (iii) comprises introducing said differentiated cells into the nervous system of said subject, such that said differentiated cells compensate for said damaged myelin or neurological deterioration.

Claim 18 (Currently Amended): A method for preparing differentiated cells, comprising

(i) providing a composition that consists essentially of mesenchymal stromal cells and a physiologically compatible carrier and

(ii) exposing said composition to conditions such that

said mesenchymal stromal cells differentiate in vitro into neurons ~~or oligodendrocytes~~.

Claim 19 (Currently Amended): A composition that consists essentially of immortalized mesenchymal stromal cells and a physiologically compatible carrier, wherein said cells comprise one or more exogenous genes and wherein at least one of said exogenous genes is hTERT.

Claim 20 (Cancelled)

Claim 21 (Cancelled)

Claim 22 (Currently Amended): A method for treating a pathology characterized by damaged myelin or neurological deterioration, comprising

(i) providing a composition in vitro that consists essentially of mesenchymal stromal cells and a physiologically compatible carrier

(ii) culturing said cells in a medium comprising a neuroblastoma conditioned medium, wherein said culturing step provides oligodendrocyte precursor cells capable of differentiating into oligodendrocytes, and

(iii) allowing said differentiated cells to compensate for said neurological deterioration or damaged myelin in a subject suffering from said pathology.

Claim 23 (Previously Presented): A method according to claim 22, wherein said neuroblastoma conditioned medium is B104 conditioned medium.

Claim 24 (Previously Presented): A method according to claim 23, wherein step (iii) comprises introducing said oligodendrocyte precursor cells into the nervous system of said subject, such that said differentiated cells compensate

for said damaged myelin.

Claim 25 (New): A method according to claim 15, wherein step (ii) comprises grafting said mesenchymal stromal cells into the central nervous system of said subject.

Claim 26 (New): A method according to claim 23, wherein step (iii) comprises grafting said differentiated cells into the central nervous system of said subject.

Claim 27 (New): A method according to claim 15, wherein said pathology is a central nervous system pathology characterized by neuron loss.

Claim 28 (New): A method according to claim 27, wherein said central nervous system pathology is selected from the group consisting of Parkinson's disease, Alzheimer's disease, Huntington's disease, stroke, and trauma.

Claim 29 (New): The method according to claim 28, wherein said central nervous system pathology is Parkinson's disease.

Claim 30 (New): A method according to claim 15, wherein said pathology is a metabolic lipid-storage disease.

Claim 31 (New): A method according to claim 30, wherein said metabolic lipid-storage disease is selected from the group consisting of Tay-Sachs, GM1 gangliosidosis, adrenoleukodystrophy, Krabbe's disease, metachromatic leukodystrophy, and multiple sclerosis.

Claim 32 (New): A method according to claim 22, wherein said pathology is a central nervous system pathology characterized by neuron loss.

Claim 33 (New): A method according to claim 32, wherein said central nervous system pathology is selected from the group consisting of Parkinson's disease, Alzheimer's disease, Huntington's disease, stroke, and trauma.

Claim 34 (New): The method according to claim 33, wherein said central nervous system pathology is Parkinson's disease.

Claim 35 (New): A method according to claim 22, wherein said pathology is a metabolic lipid-storage disease.

Claim 36 (New): A method according to claim 35, wherein said metabolic lipid-storage disease is selected from the group consisting of Tay-Sachs, GM1 gangliosidosis, adrenoleukodystrophy, Krabbe's disease, metachromatic leukodystrophy, and multiple sclerosis.